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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SORKIN, DAVID L

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/759,560

Applicant(s)

ZHA ET AL.

Examiner

David L. Sorkin

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 3, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/042,128.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 6, 7, 10-14 and 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Geary (US 3,442,002). Regarding claims 1 and 10, Geary ('002) discloses a method of forming at least one opening in a membrane pot, the method comprising providing a plurality of hollow fiber membranes (at least two if 111), the membranes having ends, providing a mold (101 including 905a or 905b) for potting the membrane end, the mold having provided therein at least one formation (another of 111) for forming at least one opening in a membrane pot; filling the mold with curable potting material (see col. 21, lines 48-55); positioning the membrane end in the mold (see col. 21, lines 48-55, Fig. 13-18); allowing the potting material to at least partially cure, whereby the membrane ends are secured in a membrane pot (see col. 21, lines 64-66); and demolding the membrane pot (see col. 21, lines 66-68), the membrane having at least one opening (openings corresponding to the hollow fibers encapsulated in the pot). Regarding claim 2, the mold is mounted on a vertically movable platform (see solid vs. phantom lines in Fig. 20). Regarding claim 4, demolding comprises raising a central ejector portion of the mold (see Figs. 16 and 17). Regarding claim 6, the mold is centrifuged (see col. 21, lines 48-62). Regarding claim 7, a collar is fitted

Art Unit: 1723

around the periphery of the mold (see Fig. 16). Regarding claim 11, the membrane ends are positioned uniformly (see Fig. 1). Regarding claim 12, the membrane ends are sealed (see Fig. 17). Regarding claim 13, the membrane ends are uniformly distributed in relationship to the at least one opening (see Fig. 1). Regarding claim 14, the membranes are positioned in a sleeve (for example 112) and inserted into a guide or collar around a periphery of the mold (see Fig. 16). Regarding claim 16, the membrane ends are fanned (see Fig. 1). Regarding claim 17, the membrane ends are trimmed to provide a uniform membrane length (see col. 21, lines 68-75). Regarding claim 18, the membrane pot is cut transversely to open the membrane ends (see col. 21, line 68 to col. 22 line 3). Regarding claims 19 and 20, the membrane ends are positioned in the mold to form a cylindrical array (see Figs. 1-4 and 13-18).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 1723

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Geary et al. (US 3,442,002); and in the alternative under 35 U.S.C. 103(a) as being anticipated by Geary et al. (US 3,442,002) in view of Brinda et al. (US 5,531,848). In col. 6, lines 45-46 of Geary et al. (US 3,442,002) it would be clear to one of ordinary skill in the art that the phrase "cooling ... or cooling" should read cooling ... or heating; however, to the extent one might argue that Geary ('002) does not disclose heat curing, Brinda et al. (US 5,531,848) is relied upon as teaching that heat curing is a suitable manner in which to cure material in which the ends of membranes are potted (see col. 12, lines 42-45).

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geary et al. (US 3,442,002). The method of Geary ('002) was discussed above, however, the order of steps required by claim 15, filling with curable material before placing membranes, is not explicitly disclosed. However, the following decisions are relied upon for holding selection of the order of adding materials is prima facie obvious: *Ex parte Rubin* 128 USPQ 440 (Bd. App. 1959), *In re Burhans* 69 USPQ 330 (CCPA 1946), and *In re Gibson* 5 USPQ 230 (CCPA 1930).

Allowable Subject Matter

7. Claims 3, 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 1723

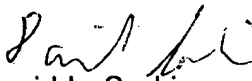
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 571-272-1148. The examiner can normally be reached on 9:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David L. Sorkin
Primary Examiner
Art Unit 1723

DLS